APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,240	12/05/2000	Krishna Bharat	0026-0001	4725

26615	7590	10/23/2003

HARRITY & SNYDER, LLP
11240 WAPLES MILL ROAD
SUITE 300
FAIRFAX, VA 22030

EXAMINER
MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
2175	7

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/729,240	BHARAT ET AL.
	Examiner	**Art Unit**
	Tony Mahmoudi	2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2003* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 12 DOV POPOVICI

Attachment(s)

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

DETAILED ACTION

Remarks

1. In response to communications filed on 08-August-2003, claims 1-41 are presently pending

in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3. Claims 1-3, 5-8, 10-15, 17-22, 24-27, 29-32, 34, and 36-41 are rejected under 35

U.S.C. 103(a) as being unpatentable over <u>Nanjo et al</u> (U.S. patent No. 5,778,361) in view of

<u>Pant et al</u> (U.S. patent No. 6,012,053.)

As to claim 1, <u>Nanjo et al</u> teaches a method of identifying (see Abstract) semantic units

within a search query (see column 5, lines 23-32, where "semantic units" is read on "text in

compound-word languages", and see column 8, lines 21-33, where "semantic units" is read

on "combination of text strings") comprising:

identifying documents relating to the query (see column 6, lines 51-58) by comparing

search terms in the query to an index of a corpus (see Abstract, and see column 21, lines 29-

30);

generating a plurality of multiword substrings from the query (see column 4, lines 4-12,

and see column 8, lines 21-33, where "multiword substrings" is read on "combination of text

strings") in which each of the substrings includes at least two words (see column 8, line 33.

It is inherent that a "phrase" contains at least two words");

Nanjo et al does not teach calculating, for each of the generated substrings, a value that

corresponds to a comparison between one or more of the identified documents and the

generated substrings; and selecting semantic units from the generated multiword substrings

based on the calculated values.

Pant et al teaches a system for relevance-ranking of search results (see Abstract), in

which he teaches calculating, for each of the generated substrings, a value that corresponds to

a comparison between one or more of the identified documents and the generated substrings

(see column 7, lines 7-50); and selecting semantic units from the generated multiword

substrings based on the calculated values (see column 10, lines 38-49, and see column 13,

lines 9-25.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Nanjo et al as modified to include calculating,

for each of the generated substrings, a value that corresponds to a comparison between one or

more of the identified documents and the generated substrings; and selecting semantic units

from the generated multiword substrings based on the calculated values.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Nanjo et al as modified, by the teaching of Pant et al,

because calculating, for each of the generated substrings, a value that corresponds to a

comparison between one or more of the identified documents and the generated substrings; and selecting semantic units from the generated multiword substrings based on the calculated values, would enable the system to define and apply relevancy values (factors) between documents as well as between contents of documents in order to identify the most relevant (strongest) match between the search terms and the identified terms within a query.

As to claims 2 and 26, Nanjo et al as modified teaches wherein the identification of the documents further includes:

generating an initial list of relevant documents (see Nanjo et al, column 3, lines 19-26, where "list of relevant documents" is read on "list of files or documents that satisfy the search criteria"); and

selecting a predetermined number of most relevant ones of the documents (see Nanjo et al, column 17, lines 35-50, where "most relevant" is read on "exact match") in the initial list as the identified documents (see Nanjo et al, column 8, lines 1-5, where "selecting documents" is read on "editing a particular document".)

As to claims 3, 8, 15, 22, 27, and 32, Nanjo et al as modified teaches wherein the selection of the semantic units further includes:

selecting semantic units from the generated substrings that have calculated values above a predetermined threshold (see Nanjo et al, column 20, lines 41-50, where "predetermined threshold" is read on "predetermined step size", also see Pant et al, column 8, lines 57-62.)

As to claims 5, 10, 17, 24, 29, and 34, <u>Nanjo et al</u> as modified teaches wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that substrings that occur in more relevant ones of the identified documents are assigned higher calculated values than substrings that occur in less relevant ones of the documents (see <u>Pant et al</u>, column 7, lines 23-30, and see column 10, lines 36-49.)

As to claim 6, <u>Nanjo et al</u> teaches a method of locating documents (see column 4, lines 4-18) in response to a search query (see column 6, lines 22-26), the method comprising:

receiving the search query from a user (see column 6, lines 22-26);

generating a list of relevant documents based on search terms of the query (see column 6, lines 30-35);

identifying a subset of documents that are most relevant ones of the documents in the list of relevant documents (see column 17, lines 35-47, where "most relevant document" is read on "exact matches".)

generating a plurality of multiword substrings from the query (see column 4, lines 4-12, and see column 8, lines 21-33, where "multiword substrings" is read on "combination of text strings") in which each of the substrings includes at least two words (see column 8, line 33. It is inherent that a "phrase" contains at least two words");

refining the generated list of relevant documents based on the selected semantic units (see column 19, lines 15-25, where "refining" is read on "optimizing".)

Nanjo et al does not teach:

calculating, for each of the generated substrings, a value related to one or more

documents in the subset of documents that contain the substrings; and

selecting semantic units from the generated multiword substrings based on the calculated

values.

Pant et al teaches a system for relevance-ranking of search results (see Abstract), in

which he teaches calculating, for each of the generated substrings, a value related to one or

more documents in the subset of documents that contain the substrings (see column 7, lines

7-50); and selecting semantic units from the generated multiword substrings based on the

calculated values (see column 10, lines 38-49, and see column 13, lines 9-25.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Nanjo et al as modified to include calculating,

for each of the generated substrings, a value related to one or more documents in the subset

of documents that contain the substrings; and selecting semantic units from the generated

multiword substrings based on the calculated values.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Nanjo et al as modified, by the teaching of Pant et al,

because calculating, for each of the generated substrings, a value related to one or more

documents in the subset of documents that contain the substrings; and selecting semantic

units from the generated multiword substrings based on the calculated values, would enable

the system to define and apply relevancy values (factors) between documents as well as

between contents of documents in order to identify the most relevant (strongest) match

between the search terms and the identified terms within a query.

As to claims 7 and 31, Nanjo et al as modified teaches wherein the identified subset

includes a predetermined number of the most relevant ones of the documents in the list of

relevant documents (see Nanjo et al, column 17, lines 35-50, where "most relevant" is read

on "exact match".)

As to claim 11, Nanjo et al teaches a system (see Abstract) comprising:

a server connected to a network (see column 12, lines 7-12, where in a "networked

environment", the "computer system 400" plays the role of "a server"), the server receiving

search queries from users via the network (see column 6, lines 22-26), the server including:

at least one processor (see column 11, lines 28-30, and see column 12, lines 7-12); and

a memory operatively coupled to the processor (see column 11, line 30), the memory

storing program instructions that when executed by the processor (see column 11, lines 57-

67), cause the processor to:

identify a list of documents (see column 4, lines 4-18) relating to the search query (see

column 6, lines 22-26, and see lines 30-35) by matching individual search terms in the query

to an index of a corpus (see Abstract, and see column 21, lines 29-30); a plurality of

multiword substrings from the query (see column 4, lines 4-12, and see column 8, lines 21-

33, where "multiword substrings" is read on "combination of text strings") in which each of

the substrings includes at least two words (see column 8, line 33. It is inherent that a "phrase" contains at least two words".)

For the teachings of: calculate, for each of the generated substrings, a value relating to one or more documents of the identified list of documents that contain the generated substrings; and select semantic units from the generated multiword substrings based on the calculated values, applicants are kindly directed to remarks and discussions made in claims 1 and 6 above.

As to claim 12, Nanjo et al as modified teaches wherein the processor refines the identified list of documents based on the selected semantic units (see Nanjo et al, column 19, lines 15-25, where "refining" is read on "optimizing".)

As to claims 13 and 20, Nanjo et al as modified teaches wherein the system transmits the refined list of documents to the user (see Nanjo et al, column 3, lines 19-28, where "transmitting to the user" is read on "displaying to the user.")

As to claim 14, Nanjo et al as modified teaches a network (see Nanjo et al, column 12, lines 7-12.)

Nanjo et al as modified still does not teach wherein the network is the Internet and the corpus is a collection of web documents.

Pant et al, in another embodiment of his invention, teaches wherein the network is the Internet (see column 3, lines 22-32) and the corpus is a collection of web documents (see

column 2, lines 4-10, where "web documents" is read on "documents written in SGML, HTML, or other mark-up languages", and see column 5, lines 61-63.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Nanjo et al as modified to include wherein the network is the Internet and the corpus is a collection of web documents.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Nanjo et al as modified, by the further teaching of Pant et al, because wherein the network is the Internet and the corpus is a collection of web documents, would expand the usability of the system across the universe by connecting to the internet and searching web-based documents from any remote location accessible by a computer to the network.

As to claim 18, Nanjo et al teaches a server (see column 12, lines 7-12, where in a "networked environment", the "computer system **400**" plays the role of "a server") comprising:

a processor (see column 11, lines 28-30, and see column 12, lines 7-12); and

a memory operatively coupled to the processor (see column 11, line 30), the memory including:

a ranking component (see column 26, lines 31-35) configured to return a list of documents (see column 4, lines 4-18) ordered by relevance in response to a search query (see column 6, lines 22-26, and see lines 30-35); and

a semantic unit locator component configured to locate semantic units (see column

10, lines 1-4), each having a plurality of words (see column 8, line 33. It is inherent that

a "phrase" contains a plurality of words"), in search queries entered by a user (see

column 7, lines 15-18.)

For the teaching of: locating semantic units based on a predetermined number of most

relevant documents in the list of documents returned by the ranking component,

applicants are kindly directed to remarks and discussions made in claims 1 and 6 above.

As to claim 19, Nanjo et al as modified teaches the server further including: a search

engine (see Nanjo et al, column 15, lines 31-38) configured to refine the list of documents

based on the located semantic units (see Nanjo et al, column 19, lines 15-25, where

"refining" is read on "optimizing".)

As to claim 21, applicants are kindly directed to the remarks and discussions made in

claims 1, 6, and 18 above.

As to claim 25, Nanjo et al teaches a computer-readable medium storing instructions for

causing at least one processor to perform a method that identifies semantic units within a

search query (see Abstract, and see column 11, line 28 through column 12, line 12.)

For the remaining teachings of this claim, applicants are directed to the remarks and

discussions made in claims 1 and 6 above.

As to claim 30, applicant is directed to the remarks and discussions made in claims 1, 6, 11, 18, and 25 above.

As to claim 36, applicant is directed to the remarks and discussions made in claims 1, 6, 11, 18, 25, and 30 above.

As to claims 37, 38, 39, 40, and 41, Nanjo et al as modified teaches wherein the calculated values are weighted based on a ranking defined by relevance of the identified documents, such that an occurrence of a substrings in a more relevant one of the documents is weighted more than an occurrence of the substrings in a less relevant one of the documents (see Pant et al, column 7, lines 7-50, and see column 10, lines 38-49.)

4. Claims 4, 9, 16, 23, 28, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanjo et al (U.S. patent No. 5,778,361) in view of Pant et al (U.S. Patent No. 6,012,053), as applied to claims 1-3, 5-8, 10-15, 17-22, 24-27, 29-32, 34, and 36-41 above, and further in view of Tso et al (U.S. Patent No. 6,385,602.)

As to claim 4, 9, 16, 23, 28, and 33, Nanjo et al as modified teaches wherein the selection of the semantic units further includes ranking search results based on a relevance factor (see Pant et al, column 7, lines 15-30, where "more relevant" and "less relevant" terms are taught.)

Nanjo et al as modified still does not teach discarding the generated substrings that overlap other ones of the generated substrings with higher calculated values.

Tso et al teaches dynamic categorization of search results (see Abstract), in which he teaches discarding the generated substrings that overlap other ones of the generated substrings with higher calculated values (see column 5, lines 9-28.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Nanjo et al as modified, to include discarding the generated substrings that overlap other ones of the generated substrings with higher calculated values.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Nanjo et al as modified, by the teaching of Tso et al, because discarding the generated substrings that overlap other ones of the generated substrings with higher calculated values, would enable the system to present the most relevant results to the user in a search query by discarding the hits with lower relevance factors. For example, a search criteria that results in twenty thousand hits, discards nineteen thousand nine hundred less relevant hits and only displays the one hundred highest relevant hits to the user, as taught by Tso et al (see column 5, lines 28-32.)

5. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nanjo et al (U.S. patent No. 5,778,361) in view of Pant et al (U.S. Patent No. 6,012,053), as applied to claims 1-3, 5-8, 10-15, 17-22, 24-27, 29-32, 34, and 36-41 above, and further in view of Freimann et al (U.S. Patent No. 6,134,554.)

As to claim 35, <u>Nanjo et al</u> as modified still does not teach wherein the computer-readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier wave.

<u>Freimann et al</u> teaches a system and method for recording receipt of information (see Abstract), in which he teaches wherein the computer-readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier wave (see column 14, lines 17-21.)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified <u>Nanjo et al</u> as modified to include wherein the computer-readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier wave.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Nanjo et al</u> as modified by the teaching of <u>Freimann et al</u>, because the computer-readable medium being a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier wave, would increase the system flexibility to incorporate any/all means of data storage in order to maintain maximum flexibility and compatibility with a variety of hardware systems featuring any of the mentioned variety of storage means.

Response to Arguments

6. Applicant's arguments filed on 08-August-2003 with respect to the rejected claims in view of

the cited references have been fully considered but they are moot in view of the new grounds

of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Patent/Pub. No.	Issued to	Cited for teaching
US 6,493,744	Emens et al	Automatic rating and filtering of contents in a data file.
US 6,317,718	Fano	Location-based filtering of relevant content in a data file.

8. Any inquiries concerning this communication or earlier communications from the examiner

should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The

examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

October 8, 2003

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100